claims into their respective independent claims. Applicant has also amended claim 36 to add similar limitations of lip sections for the first and second piston seals.

Applicant has amended claims 9, 19, 26, 27, 28, 33, and 35 to adjust dependencies consistent with the above amendments. These amendments do not change the scope of the claims.

Applicant has amended claim 40 to correct an error in dependency discovered by Applicant during Applicant's review of the application. The amendment does not change the scope of the claim.

Claim Rejections Under 35 U.S.C. § 112

Claims 5-9, 15-19 and 37-39 are rejected under 35 U.S.C. § 112, 2nd paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter Applicant regards as the invention. Applicants respectfully traverse the rejections.

The Office Action asserts that claims 5, 15, and 37 contain "improper English," citing the phrase "projection compressible upon insertion . . . into the cylinder . . . ."[1] Applicant respectfully disagrees. The word "compressible" is an adjective meaning "capable of being compressed." The phrase correctly expresses the concept that the annular projection is capable of being compressed when the piston head is inserted into the cylinder, and is therefore not indefinite. For these reasons, Applicant respectfully requests withdrawal of the rejections.

Claim Rejections Under 35 U.S.C. § 102

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim."[2] Applicant respectfully submits that none of the cited art discloses each and every element of Applicant's claimed subject matter, arranged as in the claim.

No specific pinpoint references within the cited art or to Applicant's claimed subject matter are made by the Office Action in support of any of the rejections. "The goal of examination is to clearly articulate any rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity."[3] If the arguments below are not considered persuasive in overcoming the rejections, Applicants respectfully request that references to the relevant column or page number(s) and line number(s) of the cited art be provided to allow Applicant such opportunity.

Claims 1-3, 5-9, 11-13, 15-19, 21-23, 25, 27, 29, 30, 32-34, and 36-39 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Pittman, U.S. Patent No. 3,319,537. Applicant respectfully traverses the rejections.

Applicant has cancelled claims 25 and 32.

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[1] Paper 7, page 2.

[2] *Lindemann Maschinenfabrik v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458, 221 U.S.P.Q. 481, 485 (Fed. Cir. 1984).

[3] MPEP § 706.

With respect to claims 1, 11, 21, 29, and 36, Pittman fails to recite a piston seal with a heel section of a first resilient material embedding a flange in an posterior portion of the heel section and a lip section of a less hard second resilient material concentrically connected to an anterior portion of the heel section distal to the piston hub as in Applicant's claimed subject matter. The cylindrical molded body 34 of Pittman is not connected to the slip ring 43 distal to the washer 33 on an anterior portion of the slip ring 43, but is molded to (and in some embodiments, through) the washer 33, while the slip ring 43 is connected outwardly of both the molded body 34 and the washer 33.[4] Further, the slip ring 43 is not recited as being resilient but as "relatively rigid."[5] For these reasons, Applicant respectfully requests withdrawal of the rejections.

Claims 2-3. 5-9, 12-13, 15-19, 22-23, 27, 29, 30, 33-34, and 37-39 depend from allowable claims 1, 11, 21, 29, and 36 and are therefore also allowable. For this reason, Applicant respectfully requests withdrawal of the rejections.

Further, with respect to claims 5, 15, 33, and 37-38, Pittman fails to recite forming an annular projection on an outer surface of a lip section of a second resilient material, where the annular projection has a maximum diameter interior to the annular projection as in Applicant's claimed subject matter. For these additional reasons, Applicant respectfully requests withdrawal of the rejections.

Claims 1-7, 11-17, 21-26, 29-33, and 35-37 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Dailey, U.S. Patent No. 3,136,228. Applicants respectfully traverse the rejections.

Applicant has cancelled claims 25 and 32.

With respect to claims 1, 11, 21, 29, 35, and 36, Dailey fails to recite a piston seal with a heel section of a first resilient material embedding a flange in an posterior portion of the heel section and a lip section of a second resilient material concentrically connected to an anterior portion of the heel section distal to the piston hub as in Applicant's claimed subject matter. The lip 68 of each piston portion 16 and 18 of Dailey is not connected distal to the piston hub on an anterior portion of a resilient heel section as in Applicant's claimed subject matter. Rather, the sealing and cushioning member 64 extends over one entire axial surface 66 of the disk 62.[6] Further, the annular ring of low friction material 74 secured to the radially outward circumference of the supporting ring 72 is not recited as being resilient but as a low friction material that is "relatively hard" "whereby relatively high pressures may be withstood by the piston 10 and in operation the piston 10 is guided within the sleeve 22."[7] For these reasons, Applicant respectfully requests withdrawal of the rejections.

Claims 2-7, 12-17, 22-26, 30-33, and 37 depend from allowable claims 1, 11, 21, 29, and 36, and are therefore also allowable. For this reason, Applicant respectfully requests withdrawal of the rejections.

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[4] Figs. 3-4; col. 2, line 38 – col. 3, line 3.

[5] Col. 2, lines 55-65; col. 3, lines 16-18.

[6] Figs. 1, 3; col. 3, lines 11-21.

[7] Col. 3. line 57 – col. 4, line 2.

Further, with respect to claims 5, 15, 33, and 37, Dailey fails to recite forming an annular projection on an outer surface of a lip section, where the annular projection has a maximum diameter interior to the annular projection, as in Applicant's claimed subject matter. The lip 68 radially outward tapers axially of the disk 62.[8] Thus, the maximum diameter of the lip portion 68 is not interior to the lip portion 68 but is on an exterior edge of the lip portion 68. For these additional reasons, Applicant respectfully requests withdrawal of the rejections.

Claims 1-4, 10-14, 20-23, 29, 30, 32, 35, and 36 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Schwartz, U.S. Patent No. 3,176,595. Applicants respectfully traverse the rejections.

With respect to claims 1, 11, 21, 29, 35, and 36, Schwartz fails to recite use of two different resilient materials. The plastic piston assembly of Schwartz is molded from a single thermoplastic such as polyurethane, and does not contain a lip section of a second resilient material having a hardness less than that of the first resilient material of a heel section as in Applicant's claimed subject matter. Further, Schwartz fails to recite the heel section and lip section elements of Applicant's claimed subject matter, arranged as in those claims. For these reasons, Applicant respectfully requests withdrawal of the rejections.

Claims 2-4, 10, 12-14, 20, 22-23, and 30, depend from allowable claims 1, 11, 21, and 29, and are therefore also allowable. For this reason, Applicant respectfully requests withdrawal of the rejections.

Additionally, with respect to claims 4 and 14, Schwartz fails to recite an annular lip formed "on a posterior surface of the annular flange, the heel section overlapping the annular lip," as in Applicant's claimed subject matter. For this additional reason, Applicant respectfully requests withdrawal of the rejections.

Claims 1-4, 11-14, 21-23, 29-32, 35, and 36 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by either McQuaid, U.S. Patent No. 1,716,474 or Péras, U.S. Patent No. 2,994,571. Applicants respectfully traverse the rejections.

With respect to claims 1, 11, 21, 29, 35, and 36, neither McQuaid nor Péras recite use of two different resilient materials, the second resilient material of a lip section having a hardness less than the hardness of the first resilient material of a heel section as in Applicant's claimed subject matter. Further, neither McQuaid nor Péras recites the heel section and lip section elements of Applicant's claimed subject matter, arranged as in those claims. For these reasons, Applicant respectfully requests withdrawal of the rejections.

Claims 2-4, 12-14, 22-23, and 30-31 depend from allowable claims 1, 11, 21, and 29 and are therefore also allowable. For this reason, Applicant respectfully requests withdrawal of the rejections.

Additionally, with respect to claims 4, 14, and 31, both McQuaid and Péras fail to recite an annular lip formed "on a posterior surface of the annular flange, the heel section overlapping the annular lip," as in Applicant's claimed subject matter. For this additional reason, Applicant respectfully requests withdrawal of the rejections.

[8] Fig. 3; col. 3, lines 31-34.

Claim Rejections Under 35 U.S.C. § 103

Claims 28 and 40 are rejected under 35 U.S.C. § 103(a) as being unpatentable over McQuaid, U.S. Patent 1,716,474, in view of Schwartz, U.S. Patent No. 3,176,595. Applicants respectfully traverse the rejections.

Claims 28 and 40 depend from allowable claims 21 and 36 and are therefore also allowable. For this reason, Applicant respectfully requests withdrawal of the rejections.

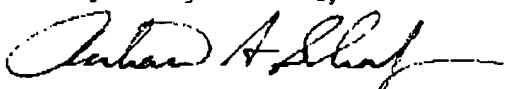
CONCLUSION

The prior art made of record, but not specifically cited, is not believed to disclose any significant information that is not sufficiently discussed in this Response.

It is respectfully submitted that all issues and rejections have been adequately addressed and that all claims as amended and pending following entry of this Response are now allowable and that the case should be advanced to issuance.

If the Examiner has any questions or wishes to discuss the claims as amended, the Examiner is encouraged to call the undersigned at the telephone number indicated below.

Respectfully submitted,



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ATTACHMENT A

Clean Version of Pending Claims (as of January 21, 2003)

1. (Once Amended) A piston head assembly for reciprocating in a cylinder, the cylinder having an inside surface, the inside surface having an inside diameter, the piston head assembly comprising:

a piston hub comprising:

an annular flange having an outer surface; and

an annular resilient piston seal mounted on the piston hub, the annular resilient piston seal comprising:

an annular heel section of a first resilient material having a first hardness, the annular flange concentrically embedded into a posterior portion of the annular heel section, an outer portion of the posterior portion of the annular heel section surrounding a portion of the outer surface of the annular flange; and

a lip section of a second resilient material, the second resilient material having a second hardness with the second hardness being less than the first hardness, the lip section concentrically connected to an anterior portion of the annular heel section, the lip section sealing with the inside surface of the cylinder.

2. The piston head assembly of claim 1, wherein the annular resilient piston seal is bonded to the piston hub.

3. The piston head assembly of claim 1, wherein the annular heel section surrounds the entire outer surface of the annular flange.

4. The piston head assembly of claim 3, the annular flange comprising:

an annular lip on a posterior surface of the annular flange, the heel section overlapping the annular lip.

5. (Once Amended) The piston head assembly of claim 1, the lip section comprising:

an annular projection formed in an outer surface of the lip section, the annular projection having a maximum outer diameter in an interior portion of the annular projection greater than the inside diameter of the inner surface of the cylinder, the annular projection compressible upon insertion of the piston head assembly into the cylinder, forming a seal.

6. The piston head assembly of claim 5, the annular projection formed by machining the second resilient material.

7. The piston head assembly of claim 5, the annular projection formed by molding the second resilient material.

8. The piston head assembly of claim 5, wherein the annular projection has a generally triangular cross section.

9. (Once Amended) The piston head assembly of claim 1, wherein the second resilient material is a polyurethane.

10. The piston head assembly of claim 1, wherein the first resilient material is a polyurethane.

11. (Once Amended) A resilient annular piston seal for mounting on a piston head for reciprocating in a cylinder, the cylinder having an inside surface, the inside surface having an inside diameter, the resilient annular piston seal comprising:

an annular flange having an outer surface;

an annular heel section of a first resilient material having a first hardness, the annular flange concentrically embedded into a posterior portion of the annular heel section, an outer portion of the posterior portion of the annular heel section surrounding a portion of the outer surface of the annular flange; and

a lip section of a second resilient material, the second resilient material having a second hardness with the second hardness being less than the first hardness, the lip section concentrically connected to an anterior portion of the annular heel section, the lip section sealing with the inside surface of the cylinder.

12. The piston seal of claim 11, wherein the piston seal is bonded to the annular flange.

13. The piston seal of claim 11, wherein the annular heel section surrounds the entire outer surface of the annular flange.

14. The piston seal of claim 13, the annular flange comprising:

an annular lip on a posterior surface of the annular flange, the annular heel section overlapping the annular lip.

15. (Once Amended) The piston seal of claim 11, the lip section comprising:

an annular projection formed in an outer surface of the lip section, the annular projection having a maximum outer diameter in an interior portion of the annular projection greater than the inside diameter of the inner surface of the cylinder, the annular projection compressible upon insertion of the piston head assembly into the cylinder, forming a seal.

16. The piston seal of claim 15, the annular projection formed by machining the second resilient material.

17. The piston seal of claim 15, the annular projection formed by molding the second resilient material.

18. The piston seal of claim 15, wherein the annular projection has a generally triangular cross section.

19. (Once Amended) The piston seal of claim 11, wherein the second resilient material is a polyurethane.

20. The piston seal of claim 11, wherein the first resilient material is a polyurethane.

21. (Once Amended) A method of sealing a piston head for reciprocating in a cylinder, the cylinder having an inside surface, the inside surface having an inside diameter, the method comprising the steps of:

forming an annular heel section from a first resilient material having a first hardness;

concentrically embedding an annular flange in a posterior portion of the annular heel section, covering a portion of the outer surface of the annular flange with the first resilient material;

attaching the annular heel section to the annular flange, forming a piston head;

concentrically forming an annular lip section from a second resilient material having a second hardness onto an anterior surface of the annular heel section, with the second hardness being less than the first hardness, the annular lip section having a maximum outer diameter in an interior portion of the annular lip section larger than the inside diameter of the inside surface; and

inserting the piston head into the cylinder, comprising the step of:

radially compressing the annular lip section to form a seal

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22. The method of claim 21, the step of attaching the annular heel section to the annular flange comprising the step of:

bonding the annular heel section to the annular flange.

23. The method of claim 21, the step of concentrically embedding an annular flange in a posterior portion of the annular heel section comprising the step of:

covering the entire outer surface of the annular flange with the annular heel section.

24. The method of claim 23, further comprising the step of:

concentrically forming an annular lip in a posterior surface of the annular flange; and

the step of embedding the annular flange comprising the step of:

wrapping the annular heel section around the outer surface of the annular flange onto the annular lip of the annular flange.

25. (Cancelled).

26. (Once Amended) The method of claim 21, the step of concentrically forming an annular lip section comprising the step of:

forming an annular projection on an outer surface of the lip section, the annular projection having a maximum outer diameter in an interior portion of the annular projection equal to the maximum outer diameter of the lip section.

27. (Once Amended) The method of claim 21, wherein the second resilient material is a polyurethane.

28. (Once Amended) The method of claim 21, wherein the first resilient material is a polyurethane.

29. (Once Amended) A method of improving the life of a reciprocating piston seal in a cylinder, the cylinder having an inside surface, the inside surface having an inside diameter, the method comprising the steps of:

forming a resilient annular piston seal from a resilient material onto an annular piston hub having an anterior surface, a posterior surface, and an outer surface, the resilient annular piston seal formed onto the anterior surface of the piston hub, the resilient annular piston seal generally having an outer diameter less than the inside diameter of the cylinder;

forming a heel portion of a first resilient material having a first hardness onto the anterior surface of the piston hub; and

concentrically forming a lip portion of a second resilient material having a second hardness onto the heel portion distal from the piston hub, with the second hardness being less than the first hardness; and

forming the resilient material around a portion of the outer surface of the piston hub, covering the portion of the outer surface of the piston hub.

30. The method of claim 29, the step of forming the resilient material around the portion of the outer surface of the piston hub comprising the step of:

bonding the resilient annular piston seal to the piston hub.

31. The method of claim 29, the step of forming the resilient material around the portion of the outer surface of the piston hub comprising the steps of:

forming a annular lip in the posterior surface of the piston hub; and

wrapping the resilient material over the annular lip.

32. (Cancelled).

33. (Once Amended) The method of claim 29, the step of forming a resilient annular piston seal further comprising the step of:

forming a concentric annular projection in the lip portion having a maximum outer diameter in an interior portion of the concentric annular projection greater than the inside diameter of the cylinder.

34. The method of claim 33, wherein the concentric annular projection has a generally triangular cross-section.

35. (Once Amended) A piston head assembly for reciprocating in a cylinder, the cylinder having an inside surface, the inside surface having an inside diameter, the piston head assembly comprising:

a piston hub comprising:

an annular flange having a first surface, a second surface, and an outer surface connecting the first surface and the second surface; and

a first annular resilient piston seal mounted on the first surface of the piston hub, the first annular resilient piston seal comprising:

a first annular heel section of a first resilient material having a first hardness; and

a first lip section of a second resilient material, the second resilient material having a second hardness with the second hardness being less than the first hardness, the lip section concentrically connected to the first annular heel section distal to the annular flange;

a second annular resilient piston seal mounted on the second surface of the piston hub, the second annular resilient piston comprising:

a second annular heel section of the first resilient material; and

a second lip section of the second resilient material, the second lip section concentrically connected to the second annular heel section distal to the annular flange; and

an annular middle section of the first resilient material connecting the first annular resilient piston seal and the second annular resilient piston seal, the annular middle section covering the outer surface of the annular flange.

36. (Once Amended) A piston head assembly for reciprocating in a cylinder, the cylinder having an inside surface, the inside surface having an inside diameter, the piston head assembly comprising:

a piston hub comprising:

an annular flange having an anterior surface, an outer surface and a posterior surface; and

an annular resilient piston seal mounted on the piston hub, the annular resilient piston seal comprising:

an annular heel section of a first resilient material having a first hardness mounted on the anterior surface of the annular flange;

an annular bumper section of the first resilient material covering the outer surface of the annular flange at an intersection between the outer surface and the posterior surface; and

a lip section of a second resilient material, the second resilient material having a second hardness with the second hardness being less than the first hardness, the lip section concentrically connected to the annular heel section distal to the annular flange.

37. (Once Amended) The piston head assembly of claim 36, the lip section comprising:

an annular projection formed in an outer surface of the lip section, the annular projection having a maximum outer diameter in an interior portion of the annular projection greater than the inside diameter of the inner surface of the cylinder, the annular projection compressible upon insertion of the piston head assembly into the cylinder, forming a seal.

38. The piston head assembly of claim 37, wherein the annular projection has a generally triangular cross section.

39. (Once Amended) The piston head assembly of claim 36, wherein the second resilient material is a polyurethane.

40. (Once Amended) The piston head assembly of claim 36, wherein the first resilient material is a polyurethane.

ATTACHMENT B

Marked-Up Version Of Amended Claims (as of January 21, 2003)

1. (Once Amended) A piston head assembly for reciprocating in a cylinder, the cylinder having an inside surface, the inside surface having an inside diameter, the piston head assembly comprising:

a piston hub comprising:

an annular flange having an outer surface; and

an annular resilient piston seal mounted on the piston hub, the annular resilient piston seal comprising:

an annular heel section of a first resilient material having a first hardness, the annular flange concentrically embedded into a posterior portion of the annular heel section, an outer portion of the posterior portion of the annular heel section surrounding a portion of the outer surface of the annular flange; and

a lip section of a second resilient material, the second resilient material having a second hardness with the second hardness being less than the first hardness, the lip section concentrically connected to an anterior portion of the annular heel section, the lip section sealing with the inside surface of the cylinder.

5. (Once Amended) The piston head assembly of claim 1, the lip section [the annular resilient piston seal further] comprising:

[a lip section of a second resilient material, the second resilient material having a second hardness with the second hardness being less than the first hardness, the lip section concentrically connected to the annular heel section, the lip section comprising:]

an annular projection formed in an outer surface of the lip section, the annular projection having a maximum outer diameter in an interior portion of the annular projection greater than the inside diameter of the inner surface of the cylinder, the annular projection compressible upon insertion of the piston head assembly into the cylinder, forming a seal.

9. (Once Amended) The piston head assembly of claim [5]1, wherein the second resilient material is a polyurethane.

11. (Once Amended) A resilient annular piston seal for mounting on a piston head for reciprocating in a cylinder, the cylinder having an inside surface, the inside surface having an inside diameter, the resilient annular piston seal comprising:

an annular flange having an outer surface;

an annular heel section of a first resilient material having a first hardness, the annular flange concentrically embedded into a posterior portion of the annular heel section, an outer portion of the posterior portion of the annular heel section surrounding a portion of the outer surface of the annular flange; and

a lip section of a second resilient material, the second resilient material having a second hardness with the second hardness being less than the first hardness, the lip section concentrically connected to an anterior portion of the annular heel section, the lip section sealing with the inside surface of the cylinder.

15. (Once Amended) The piston seal of claim 11, the lip section [the annular resilient piston seal further] comprising:

[a lip section of a second resilient material, the second resilient material having a second hardness with the second hardness being less than the first hardness, the lip section concentrically connected to the annular heel section, the lip section comprising:]

an annular projection formed in an outer surface of the lip section, the annular projection having a maximum outer diameter in an interior portion of the annular projection greater than the inside diameter of the inner surface of the cylinder, the annular projection compressible upon insertion of the piston head assembly into the cylinder, forming a seal.

19. (Once Amended) The piston seal of claim [15]11, wherein the second resilient material is a polyurethane.

21. (Once Amended) A method of sealing a piston head for reciprocating in a cylinder, the cylinder having an inside surface, the inside surface having an inside diameter, the method comprising the steps of:

forming an annular heel section from a first resilient material having a first hardness;

concentrically embedding an annular flange in a posterior portion of the annular heel section, covering a portion of the outer surface of the annular flange with the first resilient material;

attaching the annular heel section to the annular flange, forming a piston head;

concentrically forming an annular lip section from a second resilient material having a second hardness onto an anterior surface of the annular heel section, with the second hardness being less than the first hardness, the annular lip section having a maximum outer diameter in an interior portion of the annular lip section larger than the inside diameter of the inside surface; and

inserting the piston head into the cylinder, comprising the step of:

radially compressing the annular lip section to form a seal

26. (Once Amended) The method of claim [24]21, the step of concentrically forming an annular lip section comprising the step of:

forming an annular projection on an outer surface of the lip section, the annular projection having a maximum outer diameter in an interior portion of the annular projection equal to the maximum outer diameter of the lip section.

27. (Once Amended) The method of claim [25]21, wherein the second resilient material is a polyurethane.

28. (Once Amended) The method of claim [24]21, wherein the first resilient material is a polyurethane.

29. (Once Amended) A method of improving the life of a reciprocating piston seal in a cylinder, the cylinder having an inside surface, the inside surface having an inside diameter, the method comprising the steps of:

forming a resilient annular piston seal from a resilient material onto an annular piston hub having an anterior surface, a posterior surface, and an outer surface, the resilient annular piston seal formed onto the anterior surface of the

piston hub, the resilient annular piston seal generally having an outer diameter less than the inside diameter of the cylinder;

forming a heel portion of a first resilient material having a first hardness onto the anterior surface of the piston hub; and

concentrically forming a lip portion of a second resilient material having a second hardness onto the heel portion distal from the piston hub, with the second hardness being less than the first hardness; and

forming the resilient material around a portion of the outer surface of the piston hub, covering the portion of the outer surface of the piston hub.

33. (Once Amended) The method of claim [32]29, the step of forming a resilient annular piston seal further comprising the step of:

[concentrically forming a lip portion of a second resilient material having a second hardness onto the heel portion distal from the piston hub, with the second hardness being less than the first hardness; and]

forming a concentric annular projection in the lip portion having a maximum outer diameter in an interior portion of the concentric annular projection greater than the inside diameter of the cylinder.

35. (Once Amended) A piston head assembly for reciprocating in a cylinder, the cylinder having an inside surface, the inside surface having an inside diameter, the piston head assembly comprising:

a piston hub comprising:

an annular flange having a first surface, a second surface, and an outer surface connecting the first surface and the second surface; and

a first annular resilient piston seal mounted on the first surface of the piston hub, the first annular resilient piston seal comprising:

a first annular heel section of a first resilient material having a first hardness; and

a first lip section of a second resilient material, the second resilient material having a second hardness with the second hardness being less than the first hardness, the lip section concentrically connected to the first annular heel section distal to the annular flange;

a second annular resilient piston seal mounted on the second surface of the piston hub, the second annular resilient piston comprising:

a second annular heel section of the first resilient material; and

a second lip section of the second resilient material, the second lip section concentrically connected to the second annular heel section distal to the annular flange; and

an annular middle section of the first resilient material connecting the first annular resilient piston seal and the second annular resilient piston seal, the annular middle section covering the outer surface of the annular flange.

36. (Once Amended) A piston head assembly for reciprocating in a cylinder, the cylinder having an inside surface, the inside surface having an inside diameter, the piston head assembly comprising:

a piston hub comprising:

an annular flange having an anterior surface, an outer surface and a posterior surface; and

an annular resilient piston seal mounted on the piston hub, the annular resilient piston seal comprising:

an annular heel section of a first resilient material having a first hardness mounted on the anterior surface of the annular flange; [and]

an annular bumper section of the first resilient material covering the outer surface of the annular flange at an intersection between the outer surface and the posterior surface; and

a lip section of a second resilient material, the second resilient material having a second hardness with the second hardness being less than the first hardness, the lip section concentrically connected to the annular heel section distal to the annular flange.

37. (Once Amended) The piston head assembly of claim 36, the lip section [the annular resilient piston seal further] comprising:

[a lip section of a second resilient material, the second resilient material having a second hardness with the second hardness being less than the first hardness, the lip section concentrically connected to the annular heel section, the lip section comprising:]

an annular projection formed in an outer surface of the lip section, the annular projection having a maximum outer diameter in an interior portion of the annular projection greater than the inside diameter of the inner surface of the cylinder, the annular projection compressible upon insertion of the piston head assembly into the cylinder, forming a seal.

39. (Once Amended) The piston head assembly of claim [37]36, wherein the second resilient material is a polyurethane.

40. (Once Amended) The piston head assembly of claim [35]36, wherein the first resilient material is a polyurethane.

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